

The intent of this Part is to protect, conserve and replace trees in order to enhance community character, provide wildlife habitat, maintain air and water quality, prevent soil erosion, provide noise buffers, and enhance property values. This Part is also intended to provide several alternative means to the Planning Commission to further the goals and objectives of the Comprehensive Plan by providing for flexible tree canopy requirements subject, however, to specified standards and findings. Tree canopy standards shall be met on site to the maximum extent feasible and tree preservation is the preferred means of accomplishing canopy objectives. Where neither preservation nor replacement on site is practical due to the specifics of the development site and/or the general nature of the development, it is intended that tree canopy not provided on site be required to be placed on an appropriate alternative site within the city and/or county.

The following terms relating to Tree Canopy are included in the Definitions (Chapter 1 Part 2): Caliper, Dripline, Tree Canopy, Tree, Type A, Tree, Type B, Tree, Type C

10.1.1 Relationship to the Comprehensive Plan

The tree canopy regulations prescribed by this Part are intended to implement the following Cornerstone 2020 Comprehensive Plan Goals and Plan Elements.

Goals	Plan Elements
Livability Strategy Goals F2; F3; F4; G4	Guidelines 3, 10, 13

10.1.2 Applicability and Basis of Calculation

- A. The requirements of this Part shall apply to all new residential subdivisions creating more than five (5) buildable lots and to all new multi-family and nonresidential development. New single-family residential construction shall provide tree(s) in accordance with the residential design standards found within chapter 5.
- B. Expansion or reconstruction of an existing nonresidential building or development shall be subject to the requirements of this Part as follows:
 1. Any development site on which there is an increase in building area or impervious surface area by **more than fifty (50) percent** or where a structure has been demolished and a new structure has been built in its place shall fully comply with the tree canopy requirements set forth in this Part.
 2. Any development site on which there is an increase in building area or impervious surface area by **more than twenty (20) percent and less than fifty (50) percent** shall provide one-half (1/2) the tree canopy required by this Part.

3. Any development site on which there is an increase in building area or impervious surface area by twenty (20) percent or less shall not be required to provide the tree canopy required by this Part.
- C. The requirements of this Part shall apply to the entire area shown on a development plan and the required canopy may be equally distributed throughout that area or be concentrated in certain parts or portions of that area.

Note: This provision (10.1.2, C) allows residential subdivisions and multi-lot commercial developments to group trees in clusters throughout the development rather than meeting the canopy requirements on a lot-by-lot basis.

10.1.3 Alternatives for Compliance

The tree canopy requirements of this Part may be satisfied at the applicant's discretion by any combination of the following means.

- A. Preservation of existing trees or tree stands on the development site.
- B. Planting new trees on the development site or as street trees on adjacent rights-of-way.
- C. Planting new trees on an alternative site approved by the Planning Commission, at the applicant's expense.

The Planning Commission may approve an alternative site for the planting of an equivalent number/amount of trees that meets any one of the following criteria: (1) a site within a public park approved by the Metropolitan Parks Department; (2) a site on a public road right-of-way, not adjacent to the development site, approved by the Director of Works or by the appropriate state or federal official in the event that the site is on a state or federal road; (3) a privately developed site upon which affordable housing has been constructed or is to be constructed; and (4) a site of existing development where the Planning Commission finds that additional tree canopy would be in the public interest. In any such case, the Planning Commission may condition its approval of an alternative site upon the agreement of the applicant to plant a tree or trees of a type that is deemed appropriate for the site. It should be noted that using an alternative site to meet the tree canopy requirements is an option available to developers that must be approved by the Planning Commission. In no case shall the Planning Commission require the off-site planting of trees to meet the requirements of this Part.

10.1.4 Tree Canopy Standards

- A. The tree canopy on a development site shall meet the applicable standards according to the site's form district, proposed land use and the amount of tree preservation, as set forth in Tables 10.1.1 and 10.1.2, below. (Percentages refer to the relation of tree canopy to gross site area in square feet.)

Table 10.1.1 Tree Canopy Categories by Form District

Land Use	Form District			
	Downtown, Traditional Marketplace Corridor, Traditional Workplace	Traditional Neighborhood	Regional Center, Town Center, Suburban Marketplace Corridor, Neighborhood, Suburban Workplace, Campus	Village
Single-Family Residential	Class A	Class B	Class C*	Class D
Multi-Family and Office	Class A	Class B	Class C	Class D
Institutional	Class A	Class B	Class C	Class D
Commercial	Class A	Class A	Class C	Class C
Industrial	Class A	Class A	Class B	Class C

* Docket No. 9-26-03; see website for adoption status outside Louisville Metro

Table 10.1.2 Minimum Tree Canopy Coverage

Class Canopy Requirement per Table 10.1.1	Preserved Tree Canopy Coverage Area	New Tree Canopy Coverage Area	Total Tree Canopy Coverage Area Required
Class A	5%	0%	5%
	4%	2%	6%
	3%	4%	7%
	2%	6%	8%
	1%	8%	9%
	0%	10%	10%
Class B	10%	0%	10%
	8%	3%	11%
	6%	6%	12%
	4%	9%	13%
	2%	12%	14%
	0%	15%	15%
Class C	15%	0%	15%
	12%	4%	16%
	9%	8%	17%
	6%	12%	18%
	3%	16%	19%
	0%	20%	20%
Class D	20%	0%	20%
	15%	6%	21%
	10%	12%	22%
	5%	18%	23%
	0%	24%	24%

- B. Developments shall be entitled to a reduction in the tree canopy requirement prescribed in Tables 10.1.1 and 10.1.2 as follows:

1. Any residential subdivision receiving at least 3.5 points for the provision of diversity housing in accordance with **Chapter 4 Part 5** (Alternative Development Incentives) of the Land Development Code shall receive a 33% reduction.
2. Any development located in the Downtown, Traditional Marketplace Corridor, Traditional Workplace and Traditional Neighborhood Form Districts shall receive reductions as follows:

- a. Tree Canopy Reduction for Nonresidential Development:

Development Floor Area Ratio (FAR)	Total Tree Canopy Reduction
FAR 0.29 or Less	No Reduction
FAR 0.30 to 0.49	33% Reduction
FAR 0.50 to 0.99	66% Reduction
FAR 1.0 and Greater	100% Reduction

- b. Tree Canopy Reduction for Multi-Family Residential Development:

Development Density (Dwelling Units per Acre)	Total Tree Canopy Reduction
12.00 Du/Acre or Less	No Reduction
12.01 to 16.00 Du/Acre	33% Reduction
16.01 to 22.00 Du/Acre	66% Reduction
22.01 Du/Acre and Greater	100% Reduction

- c. Tree Canopy Reductions for Single Family Residential Developments:

Development Density (Dwelling Units per Acre)	Total Tree Canopy Reduction
4.4 Du/Acre or Less	No Reduction
4.41 to 5.5 Du/Acre	33% Reduction
5.51 Du/Acre and Greater	66% Reduction

Note: All reductions shall be based on the total square feet of tree canopy needed on a site to meet the requirements of Tables 10.1.1 and 10.1.2.

NOTE: These reductions in the tree canopy requirements have been created in an effort to support a more compact and efficient urban form and to support infill development opportunities.

Note: Any trees or tree stands that are being preserved to meet the minimum requirements of this Part shall also be subject to the requirements of **Chapter 10 Part 4 (Implementation)** of the Land Development Code.

- C. Preservation of existing tree canopy in excess of the cover specified in Tables 10.1.1 and 10.1.2 and retention of trees in sensitive natural areas are encouraged. However, removal of existing tree canopy that covers a greater percentage of the site than stipulated in the minimum standards set forth above is permissible unless restricted by an approved development or subdivision plan or by other applicable provisions of this Land Development Code.
- D. Any tree preserved or planted to meet the minimum requirements of this Part shall be maintained in healthy condition and shall be replaced if it becomes diseased or dies.
- E. The Planning Director may require that any trees and/or tree stands preserved to meet the requirements of this Part be inspected and found to be healthy and free of disease by a certified arborist or registered landscape architect if, upon inspection of the site, he/she or his/her designee sees evidence that indicates that some or all of said trees may be unhealthy and may not be appropriate for preservation.
- F. All new trees proposed to meet the requirements of this Part shall be planted within six months of the completion of the development. When a development is to be completed in phases, trees shall be provided for each phase as determined appropriate by the Planning Director.
- G. When trees are planted off-site or on private property to meet the requirements of this Part, the applicant shall provide the Planning Director with documentation that sufficient measures have been taken to ensure the preservation and, when necessary, the replacement of said trees. Examples of such measures would include, but not be limited to, including preservation and replacement provisions in a subdivision's deed of restrictions or within a development's binding elements or by placing all of the required trees within a conservation easement or a Woodland Protection Area (WPA).

10.1.5 Calculation

- A. Any development site greater than two acres in size shall be permitted to determine the area of existing tree canopy coverage to be preserved by ground checking, aerial analysis, or any other method determined to be accurate by DPDS staff. If ground checking is utilized, then each individual tree (i.e. a tree not grouped with other trees or a part of a tree stand) intended to be retained and used to meet the tree canopy requirements herein shall be measured to determine its caliper and the credit given for that tree shall be in accordance with Table 10.1.3, below.
- B. For any development site two acres or less in size the area of tree canopy coverage for any group of trees to be retained in order to meet the tree canopy requirements of this Part shall be determined by ground checking. Credit for existing trees intended to be retained may be calculated in either of two ways:

1. measurement of the trunk to determine its caliper and the credit given for that tree shall be in accordance with Table 10.1.3, below; or
 2. the dripline may be plotted on the site plan and tree canopy credit given for the percentage of the site within the dripline.
- C. New trees planted to meet the requirements of this Part shall be given credit in accordance with Table 10.1.3, below. Such trees must meet the standards of **Chapter 10 Part 4** at the time of planting.
- D. Street trees planted in accordance with **Section 10.2.8** shall qualify for a 25% bonus in the amount of credit listed in Table 10.1.3. This credit shall apply to street trees that are mandated as well as those planted on a voluntary basis.
- E. In calculating the required number of trees, fractions less than .5 shall be dropped and greater than or equal to .5 shall be rounded up.

NOTE: *Street tree bonus: for example, a development that provides three Type A trees two inches in caliper shall receive credit for 2,250 sq ft of tree canopy.*

Note: *Table 10.1.3 gives credit for 50% of the mature canopy size when a 1 3/4" – 3" caliper tree is planted.*

Table 10.1.3 Deciduous Tree Canopy Credit

Chapter 1 Caliper	Chapter 2 Tree Type**	Chapter 3 Amount of Credit (per tree)
10 inches or greater	Type A	1,200 sq. ft. (100% mature canopy size)
	Type B	720 sq. ft. (100% mature canopy size)
	Type C	177 sq. ft. (100% mature canopy size)
Greater than or equal to 3 inches and less than 10 inches	Type A	960 sq. ft. (80% mature canopy size)
	Type B	576 sq. ft. (80% mature canopy size)
	Type C	142 sq. ft. (80% mature canopy size)
Greater than or equal to 1 3/4 inches and less than 3 inches	Type A	720 sq. ft. (60% mature canopy size)
	Type B	432 sq. ft. (60% mature canopy size)
	Type C	106 sq. ft. (60% mature canopy size)
Greater than or equal to 1 inch and less than 1 3/4 inches*	Type A	600 sq. ft. (50% mature canopy size)
	Type B	360 sq. ft. (50% mature canopy size)
	Type C	89 sq. ft. (50% mature canopy size)

"Caliper" -The diameter of a tree trunk, measured 6 inches above the ground for newly installed trees and at 4 feet-6 inches above the ground (breast height) for existing trees.

* See Chapter 10, Part 4 for criteria to plant trees less than 1 3/4 inch caliper.

** Trees are categorized as A, B and C—Large, Medium and Small; refer to Appendix 10A for species that fall within each category.

Table 10.1.4 Evergreen Tree Canopy Credit

Height	Tree Type*	Amount of Credit (per tree)
15 feet and greater	Type A	1,200 sq. ft. (100% mature canopy size)
	Type B	720 sq. ft. (100 % mature canopy size)
	Type C	177 sq. ft. (100% mature canopy size)
Greater than or equal to 9 feet and less than 15 feet	Type A	960 sq. ft. (80% mature canopy size)
	Type B	576 sq. ft. (80% mature canopy size)
	Type C	142 sq. ft. (80% mature canopy size)
Greater than or equal to 6 feet and less than 9 feet	Type A	720 sq. ft. (60% mature canopy size)
	Type B	432 sq. ft. (60% mature canopy size)
	Type C	106 sq. ft. (60% mature canopy size)

* Trees are categorized as A, B and C—Large, Medium and Small; refer to Appendix 10A for species that fall within each category.

10.1.6 Tree Preservation Plan Requirement

All applicants for development proposals which seek credit for existing tree canopy to attain the minimum canopy coverage specified in this Part shall submit a Tree Canopy Preservation plan. All tree preservation, tree canopy protection and woodland protection areas shall be in accordance with the Tree Preservation Policies of Louisville Metro Planning and Design Services. The content of such a plan is dependent upon the means by which the existing tree canopy is to be calculated as follows:

NOTE: Refer to 10.4.8 for requirements relating to tree protection during construction.

- A. If no ground checking is used to determine the existing tree canopy, then the plan shall depict the location of existing stands of trees on the site and adjacent public rights-of-way that are proposed to be retained and those that are proposed to be removed, if any.
- B. If ground checking is used to determine the existing tree canopy, then the plan shall depict the location, species and size (caliper) of any individual existing tree that is proposed to be retained to meet the requirements of this Part. The location of existing stands of trees on the site that are proposed to be retained and those that are proposed to be removed shall also be provided.
- C. Standards for Tree Canopy Preservation Areas
 1. Tree Canopy Preservation Areas (TCPA) are those areas where tree preservation has been provided to meet the tree canopy requirements of this part.
 2. The site shall be developed in accordance with the Tree Canopy

Preservation Plan. The location of the TCPA boundary delineates the limit of disturbance associated with the TCPA. The limit of disturbance shall indicate the location of the tree protection fencing.

3. No clearing, grading, construction or other land disturbing activity shall take place within the TCPA beyond pruning to improve the general health of the tree or to remove dead or declining trees that may pose a public health and safety threat. As trees are lost through natural causes, new trees shall be planted in order to maintain minimum tree canopy as specified in this part. Exception: Single Family residential development may remove trees from the TCPA as long as they are replaced with trees of a similar type (e.g. A, B or C).
4. Location of Structures and Parking
 - a. no structure shall be closer than 15 feet to the Limit of Disturbance (Tree Protection Fence).
 - b. No vehicle use area (VUA) shall be closer than 10 feet to the Limit of Disturbance (Tree Protection Fence).
5. During all construction activity (includes clearing, grading, building construction and VUA construction) a copy of the approved Tree Canopy Preservation Plan shall be on-site.

10.1.7 Landscape / Buffer Credit

Any existing trees on a site or street trees planted on an adjacent right-of-way that are used to meet the requirements of this Part shall be credited towards fulfillment of any landscaping, screening, or buffering provisions of this Chapter.

10.1.8 Waivers

- A. The Planning Commission shall have the authority to grant waivers or modifications of the tree canopy requirements contained in this Part in accordance with Chapter 11 Part 8 of the Land Development Code.
- B. The Planning Commission's designee may waive the requirement for a public hearing and take action on requests for reduction of five (5) or fewer trees or a reduction constituting less than ten (10) percent of the total tree canopy requirement, whichever is greater. Notice shall be sent in accordance with Chapter 11 Part 8 stating that a waiver request has been filed and that the Planning Commission's designee may waive the public hearing requirements and take action on the request.
- C. Required Findings; In granting a waiver the Planning Commission's designee must find that:
 1. The waiver is in compliance with the Comprehensive Plan.
 2. The applicant made a good faith effort to provide as many trees as possible on the site, on the adjacent right of way, or on an alternative site as specified in 10.1.3; and

3. There are other mitigating circumstances affecting this site which do not generally apply to sites developed for the same use and in the same form district.